

EPA Superfund Contract Lab Program (CLP)

tech tip

Working with solutions containing decachlorobiphenyl

Decachlorobiphenyl has poor solubility in most organic solvents. The maximum concentration that can be prepared in acetone, hexane, or isoctane is 200 μ g/mL.

Temperature will affect the solubility as well. Storing solutions at reduced temperatures will cause decachlorobiphenyl to precipitate.

Products containing decachlorobiphenyl must be sonicated for a minimum of 10 minutes prior to opening the ampul. Because each ultrasonic bath operates at a different energy level, 10 minutes is a guideline only. Longer sonication time will not affect product quality.

These precautions apply to working solutions prepared in your laboratory as well. The amount of compound that precipitates depends on concentration AND temperature. If you store your standards at a temperature lower than 4°C (even dilute solutions), allow extra sonication time.

Low Concentration Pesticides Mixtures, QA Mixes

L/C Pesticide Lab Control Sample (7 components)

γ -BHC (lindane)	10 μ g/mL	endosulfan sulfate	20
γ -chlordane	10	endrin	20
4,4'-DDE	20	heptachlor epoxide	
dieldrin	20	(isomer B)	10

In acetone, 1mL/ampul

cat. # 32040 (ea.)

CLP Pesticides Mixtures, Calibration Mixes

Pesticide Standard Mix A (2/88 SOW)

(10 components)

aldrin	10 μ g/mL	endrin aldehyde	25
γ -BHC (lindane)	5	heptachlor	10
4,4'-DDT	20	heptachlor epoxide	
dieldrin	10	(isomer B)	10
endosulfan I	10	methoxychlor	100
endosulfan II	20		

In hexane, 1mL/ampul

cat. # 32033 (ea.)

Pesticide Standard Mix B (2/88 SOW)

(11 components)

aldrin	10 μ g/mL	4,4'-DDD	20
α -BHC	5	4,4'-DDE	10
β -BHC	10	endosulfan sulfate	20
δ -BHC	10	endrin	10
α -chlordane	10	endrin ketone	20
γ -chlordane	10		

In hexane, 1mL/ampul

cat. # 32034 (ea.)

Pesticide Standard Mix A (9 components)

α -BHC	5 μ g/mL	endosulfan I	5
γ -BHC (lindane)	5	endrin	10
4,4'-DDD	10	heptachlor	5
4,4'-DDT	10	methoxychlor	50
dieldrin	10		

In hexane:toluene (90:10), 1mL/ampul

cat. # 32297 (ea.)

Pesticide Standard Mix B (11 components)

aldrin	5 μ g/mL	endosulfan II	10
β -BHC	5	endosulfan sulfate	10
δ -BHC	5	endrin aldehyde	10
α -chlordane	5	endrin ketone	10
γ -chlordane	5	heptachlor epoxide	
4,4'-DDE	10	(isomer B)	5

In hexane:toluene (90:10), 1mL/ampul

cat. # 32298 (ea.)

CLP Pesticides Mixtures, Calibration Mixes cont'd

Organochlorine Pesticide Mix AB #1

(20 components)

aldrin		dieldrin	
α -BHC		endosulfan I	
β -BHC		endosulfan II	
δ -BHC		endosulfan sulfate	
γ -BHC (lindane)		endrin	
α -chlordane		endrin aldehyde	
γ -chlordane		endrin ketone	
4,4'-DDD		heptachlor	
4,4'-DDE		heptachlor epoxide (isomer B)	
4,4'-DDT		methoxychlor	

200 μ g/mL each in hexane:toluene (1:1), 1mL/ampul

cat. # 32291 (ea.)

Organochlorine Pesticide Mix AB #2

(20 components)

aldrin	8 μ g/mL	endosulfan I	8
α -BHC	8	endosulfan II	16
β -BHC	8	endosulfan sulfate	16
δ -BHC	8	endrin	16
γ -BHC (lindane)	8	endrin aldehyde	16
α -chlordane	8	endrin ketone	16
γ -chlordane	8	heptachlor	8
4,4'-DDD	16	heptachlor epoxide	
4,4'-DDE	16	(isomer B)	8
4,4'-DDT	16	methoxychlor	80
dieldrin	16		

In hexane:toluene (1:1), 1mL/ampul

cat. # 32292 (ea.)

Organochlorine Pesticide Mix AB #3

(20 components)

aldrin		dieldrin	
α -BHC		endosulfan I	
β -BHC		endosulfan II	
δ -BHC		endosulfan sulfate	
γ -BHC (lindane)		endrin	
α -chlordane		endrin aldehyde	
γ -chlordane		endrin ketone	
4,4'-DDD		heptachlor	
4,4'-DDE		heptachlor epoxide (isomer B)	
4,4'-DDT		methoxychlor	

2,000 μ g/mL each in hexane:toluene (1:1), 1mL/ampul

cat. # 32415 (ea.)